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## MEMORANDUM

DATE: March 15, 1996 5400.1

TO: C. S. Evans, Remediation Services, Bldg. T893B, X3199

FROM: M. B. Murdock, Ecology, Bldg. T893B, X3560  
T. R. Ryon, Ecology, Bldg. T893B, X3657

SUBJECT: TRIP REPORT ON BIODIVERSITY LEGAL FOUNDATION TOUR OF THE BUFFER  
ZONE REGARDING PREBLE'S MOUSE AND OTHER SECTION 7  
CONSULTATION ISSUES - MBM - 026 - 96

On March 12, 1996, Ecology personnel accompanied Biodiversity Legal Foundation (BLF) representatives on a Buffer Zone tour at DOE, RFFO's request. Participants in the tour included DOE, RFFO representatives John Stover, Steve Schiesswohl, and Russell McCallister, Kaiser-Hill representatives Larry Woods, George Setlock, and Melinda Kassen, RMRS representatives Thomas Ryon and Marcia Murdock, and BLF representatives Donald "Jasper" Carlton, Sally White, Lynnae Flora, and Jay Tughton. The tour covered areas of interest to BLF including upper Rock Creek, Preble's meadow jumping mouse habitat, the extended mine permit area for Western Aggregates proposed mine extension, xeric tallgrass prairie, and the A-, B-, and C-series ponds. Two information handouts (attached) were distributed to all tour participants. One was a summary of actions taken to protect wildlife and habitats at the Site, and the second was a Preble's meadow jumping mouse fact sheet. Issues and questions that came up during the tour are presented in the bullet list below:

- Mr. Carlton was surprised that Site ecologists have so much data on the Preble's mouse and other aspects of the ecology of the Site. He was apparently under the impression that no competent ecological personnel were on the Site, and that DOE was unconcerned about environmental damages.<sup>1</sup>
- Discussions started in the West Gate Parking Lot when Mr. Stover made introductions among the group. Mr. Carlton began asking questions about the Preble's meadow jumping mouse. He gave the appearance that he was seeing what the ecology staff knew of mouse status in the Buffer Zone. Mr. Ryon answered his questions, then the group proceeded on the tour.<sup>2</sup>
- The first stop on the tour was near the Broomfield water conveyance ditch (Upper McKay Ditch) at the West Boundary Road. Ms. Murdock explained Buffer Zone ecological monitoring programs, compliance strategies, and Buffer Zone access limitations. She made the point that projects are reviewed for their possible impacts to ecologically sensitive areas during the project planning process. She also explained that projects are moved, canceled, or mitigated when impacts are anticipated.<sup>1,2</sup>
- Mr. Carlton asked about the status of the loggerhead shrike on the Site. Ms. Murdock responded that while the population is small, shrikes are present year-round. Although

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breeding has not been confirmed, Site ecologists suspect that shrikes may breed at the Site.

- During a brief discussion about the Site's rare Xeric Tallgrass Prairie Community, Ms. Murdock mentioned that there is a good sized breeding population of grasshopper sparrows in the grasslands at the Site. The grasshopper sparrow is a species that has ornithologists concerned due to declining numbers.<sup>1</sup>
- Much discussion arose around ditch maintenance. Mr. Schiesswhol explained to Mr. Carlton that ditch owners had right to maintain ditches even though they pass through federal land. Colorado water law allows water rights owners to maintain water conveyance ditches on land that does not belong to them, without the need to obtain permission from the land surface owner.<sup>1,2</sup>
- Mr. Carlton expressed dismay at how close mining came to the Site, and outrage that DOE had permitted so much surface disturbance on its properties. Mr. Schiesswhol explained that the mining permits had been approved in the 1970s or 1980s, prior to any discovery of the Preble's meadow jumping mouse at the Site.<sup>1</sup>
- The tour continued on to the Lindsay Ranch and the overlook after Ms. Kassen joined the party. Ms. Murdock used the field radios to point out important ecological features along the route of travel. The RMRS ecologists introduced the group to the Tall Upland Shrub Community and pointed out the expansive seeps and wetlands in this portion of Rock Creek. They also explained the extent of Preble's mouse and habitat along the entire reach of Rock Creek. Mr. Carlton asked to see the closest capture site to the Western Aggregate Mining Operation. Two locations were pointed out from the tour route.<sup>1</sup>
- Ms. White suggested that the knapweed problem be pointed out to the group and discussed as the tour proceeded through the upper branches of Rock Creek. Ms. White has been on previous tours of the Buffer Zone, and has an interest in the preservation of the Xeric Tallgrass Prairie.
- Mr. Carlton expressed concern about the knapweed encroachment into upper Rock Creek. He feels that the weed problem alone could be found a "may affect" action if the Preble's mouse becomes a listed species. He was informed that there is an active weed control program at the Site that is addressing the knapweed problem, and other noxious weeds as well. This information appeared to make him less agitated.<sup>1</sup>
- The tour proceeded to the pediment at the corner of the National Renewable Energy Laboratory (NREL) property, and Mr. Ryon further discussed Preble's mouse habitat, Ms. Murdock introduced the Xeric Tall Grass Prairie Community, and Mr. Schiesswhol discussed the Western Aggregate mining plans and operations. Mr. Carlton was frustrated that a mining claim could be allowed to impact such ecologically important areas, calling it "a moral issue."<sup>2</sup>
- Mr. Schiesswhol identified where further claims had been approved, and discussed the mining phases shown on the map DOE had available. Mr. Carlton expressed alarm at how close the proposed mining extensions were to Preble's habitat. He stated that as soon as the

mouse is listed (and insisted that it will be listed), DOE will have an Endangered Species Act Section 9 violation. It was not clear what he considered would be the cause of the violation. He mentioned several things he considered to be potential impacts, including weed encroachment, habitat fragmentation, and groundwater loss that might cause habitat loss. He tried to press many people to agree with him that this was an ecological problem. Mr. Schiesswhol explained that it is a private mineral right held by a private company and that there was not much to be done by DOE. Mr. Carlton stated that there must be some consideration of surface disturbance and its ecological impacts. He charged that DOE is negligent in its NEPA compliance.<sup>2</sup>

- Mr. Carlton asked if he could send in a few biologists to assess the impacts of the encroaching mining to Rock Creek. He also wanted permission to send a field team out on Western Aggregates mining operations. These questions were directed to DOE. Mr. Schiesswhol explained that BLF would have to gain permission from Western Aggregates to enter their operations to do such an assessment.<sup>1,2</sup>
- Mr. Carlton wanted to know if there was enough hydrogeologic data to predict if the Western Aggregates proposed mine extension would affect the Rock Creek seeps. He asked what groundwater data were available, and wondered if we had monitoring stations for Rock Creek. Mr. Setlock explained that there were a number of wells in the area, and that there were several years-worth of groundwater data available. Mr. Schiesswhol explained further that the Jefferson County Commissioners had conditionally approved the proposed permit extension contingent on results of several future years of groundwater monitoring data. He asked many questions that the available personnel could not answer, and was referred to the Western Aggregates mine operations personnel for that information.<sup>1</sup>
- Mr. Carlton expressed several times that he intends to continue to pursue listing of the Preble's mouse until it has been listed by the U. S. Fish and Wildlife Service. He spoke as if the mouse is already listed, and often referred to a Section 9 "taking" when discussing upstream impacts in the Rock Creek drainage.<sup>1,2</sup>
- The BLF is also very interested in the preservation of the xeric tallgrass prairie at the Site, and is also interested in the Site's "seep shrublands" that the Colorado Natural Heritage Program has identified as possibly unique (the only one of its kind).<sup>1</sup>
- From upper Rock Creek, the tour proceed to the A- and B-Ponds in Walnut Creek. The tour stopped at the B-4 Dam to discuss the Dam Toe Project and how it did not appear to have had an effect on the local Preble's mouse population. Mr. Carlton expressed dismay at the fact that the two largest populations of Preble's mouse were in "impacted areas". He was referring to the B-4 and A-1 Pond areas where the Operable Unit 6 Individual Hazardous Substance Sites (IHSSs) are located.<sup>1,2</sup>
- Mr. Ryon offered a view of the hibernaculum that Dr. Wunder (CSU) had discovered last fall. Mr. Carlton asked him if there was possibly a connection to permanent water and Preble's mouse distribution on the site. Mr. Ryon told what he knew of other jumping mouse studies that had explored this possibility, and that this was possible at the Site. The heaviest densities of mice are around the ponds. Mr. Ryon showed Mr. Carlton the hibernaculum area

and explained to him it was the only one we knew of in the western U.S. At this point, it was Mr. Ryon's opinion that Mr. Carlton realized that we, the biologists (Ms. Murdock and Mr. Ryon) were not the enemy and that they were, indeed, competent in their positions.<sup>1</sup>

- Mr. Carlton was interested in the irony of two of the heaviest populations of Preble's mice being around the IHSSs in the A- and B- Ponds. He also wondered how DOE would continue to ensure year-round flow in the ponds-area system since it appears that a constant water supply is a key characteristic of preferred Preble's mouse habitat.<sup>2</sup>
- The tour proceeded to the south Buffer Zone. At this time, the tone of the tour was more one of discovery and the realization of the Buffer Zone ecological values was apparent to the tour participants.<sup>2</sup>
- The BLF representatives were impressed by the contrast between the protected grasslands at the Site versus the heavily overgrazed pasture lands to the south and west boundaries of the Site.<sup>1</sup>
- The BLF representatives appeared impressed at the general good condition of the Buffer Zone.<sup>1</sup>
- The tour ended at the West Gate where Mr. Carlton expressed his concern about mining impacts to Rock Creek. "The DOE needs to do an Environmental Assessment on the effects of the mining." This is an issue of private mineral rights vs. surface disturbance of federal land. He stated his intent to pursue this issue further.<sup>2</sup>
- Mr. Carlton expressed the opinion that the Site's ecologists appear to have plenty of data for a Biological Assessment, and that DOE, RFFO should draw heavily on their available in-house expertise.<sup>1</sup>
- Mr. Carlton expressed his desire for DOE to get their biologists together with the U. S. Fish and Wildlife Service(USFWS) to work out issues regarding the Preble's mouse, biological assessments, and other conservation actions stating that "Marcia and Tom need to work with Bernardo Garza and Lee Carlson directly to work on these problems." Mr. Stover (DOE) agreed that this was a good idea.<sup>2</sup>
- Mr. Carlton believes that DOE, RFFO should have prepared an Environmental Assessment for the Western Aggregates mining operations, and is legally liable for not having done so. He admitted that this would be a gray area under the law, but said that he was prepared to take DOE to court for a NEPA violation to prove his point.<sup>1</sup>
- Mr. Carlton also asked why the DOE had not entered into consultation with the USFWS regarding Platte River Depletion. He also asked why a Biological Assessment on the project had not been completed and stated that he felt it was well overdue.<sup>2</sup> DOE did not respond directly to this question.<sup>1</sup>

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- Mr. Stover indicated to Mr. Carlton that DOE was in the process of developing a conservation agreement for the Site. Mr. Carlton indicated that he thought that was a step in the right direction.
- Mr. Carlton asked if there were plans to employ Dr. Stoecker for further field work on Preble's meadow jumping mice at the Site during the coming season. This question was referred to DOE and Kaiser-Hill for an answer. No commitment was made beyond that they were looking at funding for more trapping.

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1) Comments from Marcia Murdock, RMRS Ecology  
2) Comments from Thomas Ryon, RMRS Ecology

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It should be understood that this summary includes only impressions from Mr. Ryon and Ms. Murdock. Most questions during the tour were directed by Mr. Carlton, and the remainder of his party took the roles of observers. Mr. Carlton divided his time during the tour among three vehicles, and consequently, Mr. Ryon and Ms. Murdock were not privy to all of the questions and interactions between the BLF personnel and Rocky Flats personnel.

Should you have questions or require further information, please contact Ms. Murdock at extension 3560 or Mr. Ryon at extension 3657.

MBM:mbm/trr

Attachments:  
As Stated

cc:  
L. A. Guinn  
M. R. Kassen  
J. D. Krause  
A. M. Parker  
G. H. Setlock  
L. E. Woods  
ERPD Records File (2)

## ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE ACTIONS TO PROTECT HABITATS, AT-RISK SPECIES, AND OTHER WILDLIFE

- All new work sites at RFETS are surveyed for the possibility of habitat for, or presence of, species listed as threatened or endangered federally, or as species of special concern by the State of Colorado. These include candidate and at-risk species. A site-wide procedure "Identification and Protection of Threatened, Endangered, and Special-Concern Species" helps to ensure that all work sites are reviewed.
- All new work sites at RFETS are surveyed for the presence of bird's nests to ensure that no projects unduly impact actively nesting migratory birds. A site-wide procedure "Migratory Bird Evaluation and Protection" calls for surveys of work sites prior to the start of work.
- All new work sites at RFETS are surveyed for the presence of wetlands, and projects are redesigned where possible to avoid impacting wetlands. Where impacts are unavoidable, DOE works out acceptable mitigation strategies with the applicable agencies.
- Because of the presence of bald eagles in the RFETS vicinity during winter, the site developed the "Rocky Flats Plant Bald Eagle Protection Plan" to provide guidance to plant personnel on avoiding impacts to bald eagles.
- DOE has developed and implemented the "Preble's Meadow Jumping Mouse Interim Policy, Rev. 4" which directs that impacts to the Preble's meadow jumping mouse habitat be avoided except in certain compliance-related activities.
- Buffer Zone entry rules have been established to limit unauthorized activities in the Buffer Zone. Some of the rules were developed specifically to protect habitat and wildlife from unnecessary traffic and disturbance. All personnel must receive a briefing of Buffer Zone Rules, and obtain a pass and a radio prior to work in the Buffer Zone.
- Insulation, barrier devices, and redesign have been placed on the Site's powerlines where raptor hazards have been identified. These improvements have been made to help avoid raptor electrocutions.
- DOE undertook a Biological Assessment, under Consultation with the U. S. Fish and Wildlife Service, for the Standley Lake Protection Project Woman Creek Reservoir. The Biological Assessment considered impacts to the bald eagle pair that had built a nest near Standley Lake, as well as other local threatened, endangered, and candidate species. Lower Platte River impacts were also examined in the Biological Assessment and the subsequent Biological Opinion rendered by the U. S. Fish and Wildlife Service. Construction of the reservoir was scheduled around the eagle's presence so "no affect" could be achieved by the project.
- Hunting, fishing, and trapping at the Site are prohibited. Collection of any wildlife is limited to scientific studies only.
- Monthly surveys for significant species including carnivores, raptors, migratory birds, waterfowl, game animals, and at-risk species are used to monitor population trends and health of the wildlife resources at the Site.

PREBLE'S MEADOW JUMPING MOUSE  
FACT SHEET  
March 12, 1996

1. Record Summary

Preble's meadow jumping mouse (*Zapus hudsonius preblei*) is a subspecies which is apparently localized along the Colorado Front Range and Laramie Mountains in Central Colorado and adjacent Southeastern Wyoming. The population appears to have suffered a decline of its historic range in Colorado. The historic range was known from eight counties along Colorado's Front Range corridor. Today, four counties are known to contain five populations of *Zapus hudsonius*. The decline in range is believed to be due to habitat destruction from real estate development, grazing, and water diversions. Current populations in Colorado are found at the U.S. Air Force Academy, Boulder County Open Space Parcels, Fort Carson, East Plum Creek in Douglas County and Rocky Flats. The Rocky Flats population is one of the largest and the most studied of the five current populations.

The first jumping mouse recorded on Rocky Flats was an adult male captured in the Woman Creek drainage on 26 May 1991. As of today, there are 167 records of jumping mice, 7 in 1991, 13 in 1992, 11 in 1993, 34 in 1994, and 101 in 1995. Originally, some of the jumping mice captured were assigned to *Zapus princeps princeps*, the western jumping mouse. This species is common in montane situations, and there was much discussion of the coexistence of the two species at Rocky Flats. Upon further consideration of pelage and morphology, Dr. Fred Harrington of the Pawnee Natural Heritage Society and Dr. David Armstrong of the University of Colorado in Boulder both concluded that museum specimens from Rocky Flats were *Zapus hudsonius preblei* based on overall length of adults and the fact that pelage may not be a good criterion for separation of the two species. Today, all Rocky Flats captures are considered to be *Zapus hudsonius preblei*.

2. Distribution and Habitat Selection

Preble's meadow jumping mice have been recorded from all major drainages of the site; Rock Creek, Walnut Creek, Woman Creek, and the Smart Ditch drainages. The first mouse captured in Colorado was in the 1890's around the Loveland area in "rank vegetation along an irrigation ditch" (from E. Preble's field notes). The first mouse at Rocky Flats was captured in a reclaimed grassland area along Woman Creek.

All subsequent captures at Rocky Flats embody a different view of habitat selection. Captures have occurred in the following habitat types in decreasing order of occurrence: riparian shrubland, riparian deciduous woodland, short shrubland, mesic mixed grassland, tall upland shrub, short marsh, tall marsh, wet meadow, pond margins, and reclaimed grasslands. They have not been recorded in xeric grasslands, ponderosa pine savannah, or human structure biotypes. Jumping mice at Rocky Flats are apparently restricted to riparian areas, selecting multi-strata vegetation with good herbaceous cover. Populations are almost always found in association with coyote willow (*Salix exigua*).

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